QL TECHNICAL REVIEW

ISSUE 4

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EDITORIAL

Welcome to this, the fourth of the series of QL Technical Review. We have a mixed bag of goodies for you, including a review of QPAC2, a guide to Toolkit2 (partl), a review of Inkwell products, some info on using the Brother HR5, transfering ST Clip Art to the QL and so forth. I've held over part one of Rich Mellor's look at Turbocharge until next issue as he didn't have time to finish it for this issue and we had several letters to fit into this issue.

As ever I have to take most of the information printed here on trust, as I simply don't have the range of equipment, skill, software and experience to cover all these subjects. Therefore I expect everyone to approach what you see in here with a certain degree of caution. Which is not to say that everything is wrong, only I haven't been able to check it.

I have acquired a secondhand Shoen PC keyboard, and am using it to write this. All I can say is that it knocks spots off the old QL keyboard and very soon after starting to type on it I found I was able to type a lot quicker. The QL which this is attached to also has a QIMI mouse interface and mouse works very well especially with progs such as QPAC2 which are designed to use them. If anyone has any documentation on either the keyboard or the mouse interface I'd be very pleased to hear from you. This set-up also sports a Minerva ROM v1.80. Shame about the dodgy mdvs!!

QLTR3 UPDATES

I received a phone call from Simon Goodwin during the run-up to this issue and he made some points about QLTR3, not all of them flattering. In particular he advised people not to tamper with their tellies, the Di-Ren or any other way, as there can be enough electricity hanging around the chassis to do considerable damage even after a month or more (let alone 24 hours.)

On the Thor saga, Simon reckons that the v6.42 ROM has yet to appear. He has a v6.41 (or was it a v6.40 ?) which although containing some bugs, works quite well. He disputed claims that Amstrad were in the slightest worried about any copyright infringement.

No comment from PDQL regarding the non-delivery of their "C" compiler or other goods. This is hardly surprising as there are obviously considerable numbers of unsatisfied customers with outstanding orders with PDQL which has eventually resulted in them being taken to court for non-payment - in this case by Miracle Systems. Also QLSUB have similar problems. The exact state of play regarding QLSUB is unknown, but QL World has reported that they have also been taken to court for non-payment of debts / non-supply of goods. My advice is that people contact the local trading standards officer if dealers don't supply the goods or refund the money within a reasonable length of time. Also contact QUANTA and QL World.

What with Focus magazines going down owing people large sums of money, and tales I hear of software authors not receiving royalty payments from otherwise reputable software publishers, one wonders how much more of this QL writers and users will put up with. I know that businesses sometimes fail - but why should customers and authors be the ones to subsidise other people's trade debts? Why should we be conned into paying for goods and services that are advertised when they don't yet exist. At the very least no cheque should be cashed for goods unless the goods are being supplied.

QBUG BULLETIN BOARD IN BRISTOL

My apologies for the confusion caused by the last issue of QLTR. We gave an incorrect number for QBUG at the end of the article. The correct number is:

0272 - 666 - 187 (V21 and V23 24 hours.)

NEXT ISSUE

The dealine for the next issue of QLTR (#5) is October 1st. You should now have an idea of our style(s) and content. We don't pay authors for their contributions but authors are likely to get software to review or disks full of Public Domain software in exchange. It may even get you noticed by QL World - who pay very handsomely! Even if you can't do a long article letters, hints and tips all help and are much appreciated.

My apologies for the slight delay in getting this issue out. No - it wasn't the photocopier or the QL's this time. My 1 meg ST blew out its power supply!!

Richard

QL TECHNICAL REVIEW #4 - UPDATE

KEYBOARD PRODUCTS LTD

Those of you who are interested in getting a replacement keyboard, may have been rather put-off by the delay I (and other QL users) have experienced in receiving their keyboards from the above company. In one instance I am aware of the delay is 5 months.

I got so fed-up with waiting for the keyboard that on 14/8/90 I phoned the company and asked that the order be cancelled and the money refunded. Imagine my surprise when on the following Monday I received a large parcel from Market Harborough. Lo and behold, the keyboard had finally arrived! I can't let you know yet how well it works because I had to immediately ship it off to the States. But I think it is most likely that there'll be a report on progress in QLTR5. So, providing Keyboard Products don't experience any more problems, they should be able to satisfy future orders.

PUBLIC DOMAIN SOFTWARE

I've received an updated disk from Emmanuel Verbeeck of his P.D. software. I haven't added the new progs to the "batch lists" yet. The new progs include "Cataloguer" (for disk catalogues); anaQlock (on-screen analogue clock); "Touch-it!" (an Altkey programmer. The QView progs have been renamed "Tools" to avoid confusion.

COWO ELECTRONIC

This Swiss company have recently announced a new program "THOR-Desk". This is described as the definitive user-front-end package for all QDOS compatible computers. (They presumably haven't seen QPAC2!) The program is compatible with QJUMP's pointer-system and window-manager and has a host of extra features. Provided I can come to a reasonable deal with COWO and the program lives up to its description I'll be offering this one for sale. Their recommended retail price is £35 on disk and £39 on mdv. More news on this soon but don't send any money until I advertise it for sale.

COMPUTER FAIRS

We intend having a stall at the QUANTA workshop at Bristol on September 30th, and the All Formats Computer Fair in London on November 4th. If you're in Europe there will be a European Microfair in Brussels on 6th October at Beneluxlaan 22, 1800 Vilvoorde. If there is going to be a Scottish Computer Fair or a Northern Microfair (Leyland) between now and Xmas we hope to have a stall at these too.

HUSH - HUSH BITS

Good news for people who've been following the D-I-Y Toolkit articles in QL World by Simon N. Goodwin. But you'll have to wait until the relevant issue of QL World to find out what the news is. Also I've heard that a major QL publisher is hoping to publish the definitive word processor/text editor program by the end of the year. It is likely, though, that this will be the last of a long line of QL mega-programs from the author.

QLTR - PREVIOUS ISSUES

I've just received a letter from Dennis Briggs that we'll be printing in next issue. One of the important issues he raised was the potential danger involved in fiddling around with T.V.s. They are also more complicated and varied than the Di-Ren article suggested.

QL LEISURE REVIEW

For those of you who are wondering whether the cover of QLAF 9 really did signal the end of QLAF and its replacement QLLR, I can reassure you that QL Leisure Review will be out as soon as we get enough material to print. So get writing!!!

NEWS

QJUMP UPDATE

Tony Tebby has quit Britain, selling the rights to QPAC2 and his other programs to Care Electronics in the U.K. Tony is moving to France, rumour has it, to a small holding. We understand that work continues on the SMS2 emulator for the ST.

SCHOEN

Again a consolidation in the QL hardware scene with Keyboard Products Ltd taking over the Schoen product line. Evidently they have had problems sourcing certain components for the PS2 keyboard as one I ordered has taken over three months to get here. An improved design is blamed for the delay.

DIGITAL PRECISION

Freddy Vachha has acquired the rights to several Ultrasoft products. There have also been changes to the Turbo Toolkit to keep it compatible with Minerva ROM.

QL WORLD

Focus Investments have finally gone officially bust. Over the four years they were trading, the accumulated several million pounds of debts. Once all their assets were added up they were a long way off paying back to the bank what they owed them. Needless to say, the unsecured creditors of the business, including the printers and the writers failed to get a penny out of it, leaving some £1,000+ out of pocket.

As the magazine has been bought by Robert Maxwell, it would seem that its future is secure for a while, but media-watchers amongst us will remember a string of publishing failures that Maxwell has closed down with little notice. One good thing is that as Maxwell's publishing empire is profitable, then the writers shouldn't lose out this time.

MICRODRIVE EXCHANGE

According to the latest issue of QL World, Sector Software have taken over the running of Microdrive Exchange. They have also expanded into the realm of disk distribution. I sincerely hope that authors of MDX programs get paid their royalties by Sector Software. I'd advise them to check what the new arrangements to ensure they get paid. I will be interested to hear from MDX authors if they ever receive any of their outstanding monies due from the previous administration.

LIBERATION SOFTWARE

Both Q_Liberator and QLoad/Ref have been further upgraded to keep compatibility with changes in Minerva ROM. QLoad is now up to v1.7, whilst Q_Liberator is up to v3.3. It is good to see them taking the trouble to keep their products up-to-date.

C.G.H. SERVICES

We've been sent several utility programs to publish. As we get them sorted out they'll be added to our product range. Among these programs are Nick Ward's Polytext which enables multiple column output from Quill and Alasdair Taylor's Font Designer. We will also be distributing Program's DataDesign and Painter programs, together with their Clip Art disks, plus the existing range of Di-Ren, DJC, ARK and Liberation Software products. More always welcome.

QVIEW INTERNATIONAL MEGACORP

Minerva is still being developed, the latest version installed here at C.G.H. is v1.80. (Although Stuart has informed me that v1.82 is already shipping!) Much welcomed is the properly printed manual (see previous issues of QLTR). Also supplied is a disk with a variety of programs, including Trace and MultiBasic. If anyone can send in disk/mdv with examples using MultiBasic we'd be happy to include them in our P.D. Library.

Stuart also informed me that Medusa remains a good idea in search of a producer. Leon Heller has also been suggesting various QL hardware upgrade paths in New Computer Express. I beleive Miracle are working on a 68020 board for an improved QL. We look forward to hearing of further progress in the hardware development of the QL.

MICRODRIVES

Microdrives are back in production. This is most certainly welcome news as the QL scene needs a ready supply of mdvs for those QL owners who have yet to upgrade to disks. Without mdvs the machine would lose a lot of the first time buyers market.

Richard

QPAC 2 - A NEW CONCEPT IN DRIVING THE QL

£53.36
BY QJUMP LTD.
SOLE U.K. DISTRIBUTION : CARE ELECTRONICS
SOLE GERMAN DISTRIBUTION : JOCHEN MERZ
SOLE FRENCH DISTRIBUTION : QL CONTACT FRANCE

This is supposedly the new version of the original QRAM package. However, the differences between the two packages are in fact quite significant; so much so in fact that many users of the earlier program will need to adapt slightly to new methods of working. The package itself helps to provide the QL with a brand new operating system which makes control of jobs much easier.

INSTALLING THE PROGRAM

The program comes with rather a hefty manual by QJUMP's standards, which attempts to go into some depth about the program itself and operating all of the different functions. However, equipped with the knowledge that previous manuals by QJUMP have rather failed to get across the message, I opened the manual with a little trepidation. I was in for quite a pleasant surprise, since, although the main body of the manual is not really a light read, and requires some hours study, the start of the manual is concerned with leading you through a tutorial program supplied on the disk. The tutorial itself is well presented, and soon leaves you aching to know more and use the package to its full extent. Indeed, this time, the whole manual contains quite a lot of examples of how to use the different bits of the QPAC2 package.

Also supplied on the disk are three example boot programs which load in the whole program and set up different things, such as the PSION programs on one lot of keys, and DP's EDITOR on another. However, these boots are only really useful in showing you how you can set up your system, since the package is so large that even with the Trumpcard, you will need to be careful about how much you actually load into memory (I guess there would be no problems with a Hard disk). So after a few minutes careful examination of the boot programs and a long hard look at the manual, you are ready to set the system up ready for your needs. It is easy enough to do provided that you keep in mind the uses of the different functions and procedures supplied which are used to load in different programs and assign keys and 'buttons'.

A configuration program is supplied which can be used to alter different attributes of the main QPAC2 package, but see later for details.

STARTING UP TASKS

When designing your boot program, you will need careful thought about just which programs you want stored in the memory of the QL at all times.

The procedures supplied with the package allow you to load programs into memory which can be called up by pressing a key at any time, or assigning keys which will try to find the program on a disk and if it exists load it into memory and execute it. Both of these are quite flexible in that you have the option of:

(a) executing a new copy of the program regardless, or
(b) if there is already a copy of the program somewhere in memory simply switch to that copy - if a copy doesn't already exist, then execute a new copy.

MULTITASKING JOBS (or how to show off the QL)

A job on the QL is a separate program which can be run alongside other programs. Unfortunately, only one copy of BASIC can be running on the system at any one given time (wonder if QVIEW could do something about that?); but alongside this may be several machine code programs, such as editors, assemblers, clocks,....

Normally on the QL, a job will continue in the background quite happily whilst you are doing something else (unless of course it is waiting for you to type something). However this can lead to some problems since if it works using the keyrow function rather than inkey$ to read the keyboard, what you type into one thing could affect the running of another; also, if the program wants to write to the screen, it will do so, right over the top of your current program. I daresay this might be useful to someone who wants to see the effect of typing a letter whilst playing space invaders, but it certainly makes a mess of your display.

QPAC2 provides an answer to this in that it gives each job non-destructive windows, which means that the display of the present job cannot be overwritten by the output of other programs. Jobs will still carry on in the background regardless, unless they are waiting to read the keyboard or print something to the screen. If they are waiting for input, key presses will have no effect upon them until you choose that job and bring it to the top of the operating system. Printing to the screen will also wait unless you opt to switch off the non-destructive windows for that particular job when you first loaded it into the QL.

When you swap between jobs, the chosen job is brought to the front of the screen with all of its windows in the same state as when you left it and ready for you to carry on from where you left off. This means that although you can type that long letter using QUILL with the present time and date printed at the top of the screen, that adventure you had just been playing can wait happily in the background until you need some inspiration and long to switch back to it and fight that last elusive battle.

As you can gather from that last paragraph, QPAC2 allows you to multitask several copies of all of the PSION programs, each with specified amounts of memory to use. It will also allow you to multitask between jobs which do not have an active cursor attached to any of their windows (a problem with basic QLs if you try to multitask programs which use keyrow to read the keyboard).

There are several ways for the user to switch between jobs on the QL:

1. CTRL C can be used, which goes through each job in the order that they were switched on.
2. A 'button' can be assigned to the job, which you merely point to using the small on screen QPAC pointer and press <ENTER>. - see below
3. If part of the job's window is visible on the screen, simply move the QPAC pointer onto the part visible and press <ENTER>.
4. A 'hotkey' can be assigned to the job which means that whenever you press ALT and the chosen key, the job referred to is brought into the fore.
5. The 'pick' menu in QPAC2 can be called up. This lists all of the currently available jobs in the QL. Simply move the pointer onto the name of the required job and press 'ENTER'.

BUTTONS

A 'button' is a small window on the screen which contains the name of the job or 'thing' to which it refers, and simply sits in a small frame somewhere on your screen until you point to it and activate it. When pointed to, the job to which it refers is brought to the top of the screen, with all of its windows intact and pretty much in the same state as when you left it.

Buttons can be set up quite easily by putting a job to sleep, which simply entails pressing ALT F1. What this does is close all of the windows relating to the current job, and shrink the job completely so that the QL is unaware of its existence until you point to the button and re-activate it (if JOBS is typed with Toolkit II from superbasic, the shrunken job is still listed as existing but the label 'asleep' is printed after its name).

What is the point of using these buttons?

Well the idea is that a 'button frame' can be set up which lists all of the facilities available to the user at the time. Instead of having to go through all of the currently available jobs by pressing CTRL C, the user simply calls up the button frame onto the screen by pressing a specified key, and moves the pointer onto the button with the name of the required facility. This has an advantage over the different menus available from within QPAC2 since the menus will list all of the jobs currently in the QL, including anonymous ones which may be used by other jobs and not actually be available to the user. Since the person who sets up the button frame can specify what is to go into it, he is restricting the user's choice to facilities which he is allowed to use.

The use of these buttons opens up vast opportunities for the QL programmer, as can be seen by using the QD editor, which uses a button frame for all of its different functions. A further possibility is the implementation of a data retrieval system which uses certain keywords within the text as cross references to other text entries. These keywords could be printed onto the screen as buttons and although moving the QPAC pointer over the normal text would not have any effect, moving it onto a button and pressing ENTER would call up the associated cross-reference.

My only query about the use of this button frame is the fact that when ALT F1 is used to set up a button, the new button does not assume the default colours used by the rest of the button frame. It merely makes the appearance a little untidy, but does not affect the actual workings of the program.

Another minor quibble is that I have found that sometimes the button frame can become corrupted by other jobs, even though those jobs have been removed. Generally some buttons which I know to exist are left blank until the pointer is moved onto the top of them and space is pressed.

THINGS

Several people have asked me if I actually know what is meant by QJUMP when they refer to a 'THING'. Well, the concept is a little hard to understand; but to put it simply it is anything which the QL can understand. A thing can be a multitasking job; a 'hotkey' which when pressed will activate a new job, or switch to an existing copy of a job; a 'button'; one of the QPAC menus.....

Although things may be programs which are loaded in off a disk when a certain key is pressed, they are most useful as a program which sits around in memory until it is 'woken' up (ie called up from memory by the user). Although you could store a program on Ram Disk and then execute it, if it is stored as a thing, it will start up much more quickly and if it has been previously used, when it is called up again, it will still contain the same data as it did previously.

THE MENUS PROVIDED BY THE PACKAGE ITSELF

Unlike the original QRAM package, the menus provided by QPAC2 are not all called up from one main menu. Instead they all sit around inside the QL as 'things' until you wake them by pressing a certain key combination, or by calling up the button menu and pointing to their attached button. To make things (no pun intended) even more complex, each one of the menus may be referred to by other menus and thus called up in yet another way.

There are seven main menus provided by the package: Pick, Sysdef, Rjob, Jobs, Wake, Exec, and Files.

I shall examine each menu in turn:

1) Pick

This lists all of the currently executing jobs in memory which can be called up by the user. Simply move the pointer onto the name of the job you wish to use. Pressing ENTER will bring that job to the forefront of the QL and enable you to input data into it. If you press SPACE on the other hand, the job will be called up in the background, which

means that it will be printed onto the screen and then the Pick menu reprinted on top of it so that you can then proceed to 'pick' some other jobs which are to run concurrently with this other program.

2) Sysdef
This allows you to alter and view the current settings for the mouse and the current drive defaults used by the QL.

3) Rjob
This lists all of the jobs currently present in the QL's memory. Selecting any of the jobs here simply removes them from memory - useful if you are desperately close to an out of memory report.

4) Jobs
This again lists all of the jobs currently in memory. Selecting any of the jobs here will give you access to all sorts of information about them, such as what channels the job has open to it, the priority of the job, and the amount of memory used by the job. Having selected a certain job, you can alter its priority, remove it or 'pick' it as if you had used the Pick menu.

One thing I have noticed about this is that 'Unknown device' sometimes appears in list of windows owned by job, even though one program it appeared on was written by me and so I am unsure what exactly this device could be!

5) Wake
This is similar to the Pick menu except that it lists all of the currently available jobs in memory. If a copy of the job is already running, the user will be switched to that copy. If not a new copy of the program will be executed. One very useful 'thing' which can be called up from within this menu (it is also accessible from the Exec menu) is the 'hotkey' menu which lists all currently available hotkeys which are available to the user to call up different functions of the computer.

6) Exec
This menu works in conjunction with the Wake and Pick menus in that it does not look to see if there is a copy of the job already running in memory, but simply proceeds to set up a brand new copy of that program. One useful option with this menu is the possibility of typing in a command into the box given on the menu, which will then be typed into the copy of the newly executed program.

7) Files
This menu is rather more complex than the files menu given in QRAM.
Although the default filename is given as 'flp1_', pointing to this and pressing enter calls up the default drive name menu which enables the user to specify any level of directory support for disks, microdrives, ram disks and hard disks. For instance you could list all files which begin with 'flp1_' or be a little more adventurous and list all files beginning 'flp1_CGH_PD_GAMES_'. There is also the option of moving up and down the directory level at a press of a key, so that for example, you could go up a directory level and list everything starting 'flp1_CGH_PD_'.

Once you have selected the default directory for the source drive, when you ESCape this menu, a brand new button is created especially for this drive default so that you do not have to edit the drive name every time that you call up the menu in the future. The main problem with this menu is that the window it uses is just slightly too big to fit on a TV screen, and although this window has the resize and move options available (see below), no amount of moving the window to the right will enable it to fit on the screen!

The original QRAM allowed the user to specify how files were to be ordered on the screen so that it was easy to find the most recently updated files for example. Well, JUMP have gone one better with QPAC2 in that up to four different ordering regimes can be mixed (either forwards or backwards). The ordering options available are Name, Date, Time, Length and Flag (Flag states whether the program is executable or not); so for

instance you could order the listing on the menu so that all of the executable programs are listed first and these are ordered according to the Date they were last updated and then if any were updated on the same day, the time that they were last updated.

From this menu, files can be viewed to see what they contain, or you can call up the commands sub-menu to carry out certain file commands. All of the file commands can be mixed with the view command so that for example you can see the selected files before you decide whether or not to delete that particular one. Again, if you are copying a file onto another disk, the default destination directory can be selected in the same way as the source directory, with just the same amount of complexity.

I found it a little odd at first that the format sub-menu which checks to see that you really do want to format the destination media, only has an ESC command, not an OKAY command. It took a while before I realised that you had to edit the default format name and press ENTER to get it to format.

In response to calls from QRAM users that they did not know why QRAM refused to carry out a given file command, a separate window has now been implemented which prints out the error report given when the program attempted to do the specified command.

Other things noticeable about these menus is that when the list of jobs/files (or whatever) reaches a size too big to fit on the given window, arrows appear either at the top and bottom of the list, or at the right and left sides of the list. This enables you to move up and down (or sideways) through the long list in search of that item you want. Also implemented in QPAC2 are pan and scroll bars which appear alongside the window. These are merely little boxes which move up and down the side of the window depending upon where about you are in the list. If you want to go quickly to a certain place in the list, simply move the pointer to on top of one of these bars and press enter. This is all right if you want to move to the end of the list when you are in the middle, but it means that you may have to guess where that elusive item appears in the list.

Each of the menus also contain two small symbols which allow you to move the window around on the screen and to resize the window. Resizing the window is easily done, since you merely point to this symbol and move down and to the right to make the window smaller, or up and to the left to make it bigger.

SETTING THE SYSTEM UP FOR YOUR NEEDS

The QPAC2 package is supplied with the standard QJUMP configuration program, which allows you to specify certain defaults used within the package. Using this you can alter the colour of the menus, buttons etc which the package displays on screen, alter the position of the button frame so that it does not get in the way of your programs, alter whether the button frame lists the buttons horizontally or vertically, and alter the settings available from sysdef. Any changes made from within this program are made permanently to your copy of the package, in comparison with the sysdef menu which only alters the defaults until the QL is reset.

INTERACTION WITH OTHER PROGRAMS

The non-destructive windows can cause a little bit of trouble with some programs which do not keep all of their windows open throughout their operation. For example, TURBO does not keep its system windows open at the top of the screen once the Parser has finished. This means that if you go away and expect to return to find a list of errors on the screen, they will have disappeared once the program had finished. However this can be cured using the 'unlock' option provided by QPAC2 which turns off the non-destructive windows option for the job when it is first loaded into the computer.

However, QRAM used to supply this as a separate utility which could be used to alter the problem program once and for all. Unfortunately in QPAC2, you cannot do this, which causes problems with some programs (TURBO is the only one I've come across) which use a keyword to start the program off rather than relying on the user to EXECute the

separate parts.

Besides this, I have not found any problems in using QPAC2 with any other software, and one soon becomes used to all of its extra facilities, to the point where you begin to miss it should you have loaded any programs without QPAC installed.

WISHFUL THINKING

Not only was an UNLOCK program supplied with the original QRAM, but also a program called 'GRABBER' which altered the psion programs to enable them to multitask. This meant that QUILL etc. could be made to multitask without QRAM being present, since the programs had extra code added to the front of the machine code, which stops them from grabbing all of the available memory in the computer.

There are not too many other things I would like to see in QPAC2, considering how many suggestions I have sent in in the past concerning improvements that could be made to QRAM. Perhaps this is a little late in the QL's life to expect too much, but QPAC2 represents a considerable improvement in the capabilities of the QL and waits to be exploited. As more and more programs become available which utilise the QJUMP pointer system, I am certain that more and more QL users will see its advantages over other simple front-ends which are nowhere near as versatile.

Perhaps my only main quibble with the package is that sometimes when you call up a menu from within the system, it appears too far to the left to fit on a TV screen; perhaps it would be an idea to allow the package to respond to maximum window sizes for its menus and a user specified area in which the menus are to appear.

DO I NEED A MOUSE?

All of the facilities in the package are designed to be easily accessible from the keyboard or a mouse. Each of the menus' control symbols also have an associated keystroke which can be used to select them if you do not possess a mouse or do not want to zip around the screen using the cursor keys and space bar. To make selection even simpler, QJUMP have also made the lists so that there is always an associated keystroke to select/deselect items printed within a list on the menu.

OVER-VIEW

ALthough the price of the package is a little on the steep side, I would not hesitate to recommend this package to anyone who finds themselves using several multitasking programs on the QL. It certainly makes life a lot easier.

Rich Mellor

LOCAL GROUPS

I'm pleased to see that London has got its act together and a QL Users group has started meeting. I've not got details of meetings yet but if you contact Jerry Davis on 081-863-1631 he'll give you the latest info.

There is a change to the details for Chorley. The contact is Steve Hutton at 44 St. Mary's Road, Bamber Bridge, Preston, Lancs, PR5 6TE. Meetings are at the Lisieux Hall Social Club, Dawson Lane, Whittle le Woods, Chorley on the first M day of each month. (If you'd like to phone the Lancs group, give Keith Reader a bell on 02572 - 77482. Keith can also supply printer ribbons and other computing sundries.)

We recently had the pleasure of photocopying the Scottish QL User Group's Special Edition of their newsletter - done to celebrate their first year. Very neatly printed on a Laser - although I spotted almost as many spelling mistakes as there are in this issue of QLTR ! The Scottish group are keen to widen their sphere of influence and hope to arrange some meetings nearer to Glasgow in future. Contact Alan Pemberton, 65 Lingerwood Road, Newtongrange, Midlothian, Scotland, EH22 4QQ. (Tel: 031-660-1826).

Richard

EMMANUEL VERBEECK'S AMAZING P.D. DISK

Reviewed by Carl L. Cronin

During the two years in which I have owned a QL, I have found it different to most other machines in a number of ways, perhaps the most important being that most users of QL's actually love their machines: Emmanuel Verbeeck is one of these people and it is quite clear from his PD disk that he takes great pride in the programs he creates.

Emmanuel's disk is a collection of 11 programs, each very good and every one serving some useful or fun purpose. So let's switch on our QL's, insert the disk and begin our journey! After a couple of seconds of the disk wizzing about, a very nice menu and title page pops up on the screen, all you have to do is select the program of your choice, hit enter and it loads automatically.

The first program on the disk, 'Imagix v4.3', is extremely good. It's a printer dump program for Epson or Epson compatible printers, I used a Star LC-10c to test it and it worked fine. The program asks you for a filename of the screen to dump, then allows you to set a number of options. Such as printer resolution, whether you want to picture on the left, right or centre of the page, etc.

'The Mandelbrot Machine' is a Mandelbrot Set generator and very good it is too. It has all the usual Mandelbrot Set program functions, such as selecting the area to zoom into, inputting the number of iterations and producing the picture. Since I am very interested in fractals, I found this program to be very good.

The third program on the disk, 'QView' (not related to 'The QView Mega Corp'!) is a program that will multitask along side other programs and allow you to perform a few useful things. Pressing 'CTRL+1' will switch off the screen, which prevents burn in, just press it again and the screen comes back. 'CTRL+2' removes jobs. 'CTRL+3' pops up a status line, at the top of the screen, which gives you lot's of information on the current state of your machine, such as the amount of free RAM, the system date and time, whether caps lock is on, which screen mode you are in and your network station number. Once again, pressing 'CTRL+3' removes the line and returns the screen to normality. 'CTRL+4' is a very good idea, if you press this the current screen will be saved on disk, useful for grabbing screen shots for magazine reviews!

'Variable Memory Shrink' is next on the menu, and allows you to reset your QL to any memory size, useful for programs which work in 128k only (unless you have Minerva, in which case you can just hold shift down while booting up), or just for playing around in different memory sizes.

Emmanuel's disk has a program called 'SoftROM' which by the looks of it, allows you to save ROMs on disk and then load them into RAM, I was unable to test this since I don't have a ROM, but have no reason to assume that is doesn't work.

SuperKit Merger is a program performs a similar function to 'Boot_Make' from QRAM, allowing you to merge a number of 'resident extensions' into one file, to speed up booting times. There seems to be a small problem with it though: you cannot have extension files greater than 32k and the longest file should always be the last to merge in, hopefully Richard should fill us all in at the end of this article!

QPuzzle, the next on the disk, is my favourite program. It's a computer version of those slider puzzles you can get from toy shops, the only disadvantage being that you can't throw it against the wall when you get stuck! It draws a picture of the 'ghost buster' symbol the mixes it up, you then have to unmix it, I wish you luck!

I had to delve into the deepest resources of my mind to understand the next two programs, since they are still in French. The first one, "Cout au Kim et Amortissent" is a program to work out how much it will cost, per kilometer, to run your car. It asks lots of questions, such as price of petrol, cost of tax, number of spare tires (I hope I am translating this correctly!!), cost of tires, how many kilometers you travel

in a year etc. It will then work out the cost of running the car, very useful eh? Unfortunaly all the figures have to be entered in francs, and you have to understand french to be able to use this one.

"Simplex en Deux Etapes" is an optimisation program. It asks you for the number of variables in your problem and then whether you want to get a maximum or minimum solution, it then generates an equation and tries to solve it, very similar to taking the derivitive and finding where the gradient of the function is equal to 0, which will be a turning point on a graph of that function, confused?? So am I, perhaps this one needs some instuctions.

The 'Binary Loader Generator' is the penultimate program on the disk and allows you to save an area of your memory map, while programs are running, and load it back in again at any stage. It will create a SuperBASIC program to load the area of memory and will also do a checksum, to make sure it has not been corrupted.

A useful program on the disk is the microdrive/diskconvertor, which will take a program written to use on microdrives and force it to work on disk. I find this a much better solution than "flp_use mdv" since once it has been done once, you need never worry about it again.

Also included on the disk are some very good screen shots, which look as if they have been taken with some sort of scanner, some of them even have photographic quality (well as near as you can get to it on a amber monitor!)

All in all, Emmanuel Verbeek's disk is excellent and sets a very high standard to which all programmers should try to reach, both in presentation and program quality, though perhaps some instructions either in English or French would help clear up the few problems that I had.

EDITORIAL UPDATE

I am pleased that Carl found the disk to be good fun and useful to boot. (Groan). In response to his request for further documentation I've enclosed on later versions of the disk a text file that explains in more detail exactly what you can and can't do with Super Kit Manager. Note that the file maximum of 32K applies to all files except the last - this can be any length.

I must admit that both Rich Mellor and myself have been unable to get the Super Kit Manager to work properly - whether this is due to hardware incompatibilites or us or the program we're not sure yet.

Since sending Carl the disk I've removed the graphix and replaced them with mdv versions of Imagix and keyword versions of three of the programs. This will enable users to incorporate them into a Hotkey/QPAC/QRAM environment.

Currently the disk costs £3.00, or you can have a barebones selection on 2 mdvs for £1.00 each. With any luck we will be releasing a commercial version of Imagix with the mandelbrot program later this year once certain improvements have been made, in particular allowing for greater zooming in the Mandelbrot prog and the correction of some minor bugs in the Imagix prog - currently it seems determined to offset everything to the left on my printer!

Emmanuel has also promised to convert the two French programs into English when he gets time. The difficulty is not so much that of translating the words, but rather re-writing the algorithms, e.g. there is a difference between francs/km and pounds/mile based on petrol consumption in litres instead of gallons.

Richard

MICRO MEDDLER'S GUIDE TO THE BROTHER HR5

(This is George A. Jones' own suggestion for the title, not mine! Ed)

Having decided that I needed a printer that produced something a little less like a supermarket receipt, say A4 cut sheet and passable print, the very reasonably priced Brother HR5 seemed to be the economic, if not ideal, solution.

I needed a serial port version as it was intended for use on my Spectrum rig as well as the QL, and that device of course also uses an RS232 o/p via Interface 1.

As bought it was equipped with a cable for the Spectrum. This was handy as it allowed me to plug in and check it out on said machine, instantly banishing 'secondhand bargain hunter's twitch' when it worked O.K. (This fact was to add considerably to my morale in coming weeks)!

One would assume that mere substitution of the appropriate cables was all that was necessary, and just goes to show how damn silly it is to make assumptions. The serial cable you got for free (for being patient waiting for your QL) is no good, neither is the nice black bubble packed 'Standard Sinclair RS232' you just bought from your local computer emporium. I know, I just bought one. I thought at the time this isn't going to work, nothing you ever need is standard!

I checked it out with multimeter and manual. Whichever model Sinclair this lead was intended for (C5?) it was going to deliver +12v up the signal ground pin on my printer! According to the manual the HR5 did not appear to require +12v up any of its pins, so what we really had was a do-it-yourself kit consisting of a 25 pin 'D'plug, a metre of Six core and Sir Clive's pseudo BT plug. A simple problem - just open up the 25 pin end and resolder a few wires, Yep, nothin to it!

A week later I had only managed to resolve the signal ground pin with pin 7 on the HR5, also after coming to terms with the fact that Transmitted Data on Ser1 is I/P and Received Data is O/P! I consigned these to pins 2 and 3 respectively and DTR to pin 20 (hopefully!)

Now left with only line 5 on the QL plug to dispose of along with this completely useless +12v line. I turn to the QL Bible for inspiration. Under Concepts, the man says "RS232 manifests itself in many different forms. It can be an extremely difficult job, even for an expert, to connect up for the first time".

Now, he tells me!

I still have six pins, according to the Brother manual, all are ready to transmit or receive data none seem to require +12v? Shall I link 5 to 5? decisions, decisions!

Then through my letterbox came the Fifth Cavalry in the form of Richard's 'problem' photocopies. I rapidly read through all the pertinent bits and found not one, but a variety of solutions to my puzzle.

Some linked three pins, some linked four, a commercial solution for one sufferer had linked two seperate pairs! From being stuck without a solitary constructive thought, I was now stuck for choice! One item all solutions had in common was to disregard the +12v line.

I decided to follow the advice of QL guru Colin Opie, mainly I suppose because of the summary manner in disposing of my two problem lines 5 and 6." Cut 'em back " the man said. This I did with considerable pleasure. Still following instructions I used the offcuts to link pins 4,5,6 and 8 on the 25 pin"D" plug. I powered up and Eureka! we have lift off!

Why it is necessary to link a printer O/P to three printer I/P for success I have'nt a clue. The insomniacs amongst us may wish to ponder on this. Not me. At this precise

moment I need a serviceable printer, not another problem!

To try and clarify my previous ramblings this is the ultimate pinout for Serl lead.

BROTHER HR5 Thermal Transfer Printer.

Sinclair QL SER1	HR5 25 pin 'D'Plug
1 Sig.Grnd.	7 Sig.Grnd.
2 TXD	2 Tran.Data.
3 RXD	3 Rec. Data.
4 DTR	20 DTR.
5 N/C	Link 4,5,6 and 8
6 N/C	Together.

For anyone not familiar with the oddball SER1 plug and no meter to hand, the pinout is thus:

with gold plated pins uppermost and the locking lever on the right,first left is 1 running consecutively to 6 nearest the locking lever. The 25 pin 'D' plug has the pins numbered on the reverse

THE brother HR5 Thermal Transfer Printer.

Brief technical spec.

With 80 column text, full ASCII character set plus 63 graphic blocks and Epson compatibility, this printer offers quite a lot for the current asking price of around thirty quid for a good s/h specimen.

The HR5 is now discontinued alas but Brother enjoy a good reputation for backing their products.

Operating on the thermal transfer system one can use A4 cut sheet via the one time ribbon or thermal paper cut or roll, minus the ribbon. It is small, light and quiet in use and with a little care in the choice of paper will give acceptable results. It is claimed to be portable on the strength of the four UM-1 batteries. I can only say forget it, unless of course you have shares in Eveready! It will do roughly one page per set! A better bet is a small 6v PSU (2.1mm DC power plug with outside collar +v).

The HR5 boasts a Power on/off switch, Line Feed and On Line switches, fourteen dip switches (bank of 6 and bank of 8) situated under the belt, but quite accessible with an instrument screwdriver. The machine is also fitted with Paper Empty and Ribbon End alarms (beep and light) plus a Low Battery beep on CR (for Eveready shareholders!)

The paper empty alarm can be a bit of a pain as it functions far too early on A4 cut sheet for the more frugal amongst us. It can however be disabled with Esc,8 in the preamble. If you need the preamble for other codes then stick a microdrive label over the switch!

As my QL is mainly used with Quill (can't afford these exotic WP progs) I find it handy to clone two or three copies and configure them for different purposes. As the HR5 gives Bold, Compressed and Extended plus underline my usual configuration with Quill is to retain Bold and use high and low to signify Extended and Compressed with underline as was. This works very well.I haven't yet found any need for more tinkering.

I should perhaps mention that when in use it pays to keep the machine switched on, as every time you power up it does a one line spool of ribbon. The ribbon stretches the full width of the platen and continued switching on and off is rather wasteful. The printer is fairly heavy on ribbons - you can reckon on 50,000 characters per ribbon!

The price of these one time ribbons can vary considerably, current prices are in the region of three to five pounds so you need to shop around. I do not know if this particular one can be re-inked. I keep meaning to ask one of the advertisers in QLTR about this service.

While on the subject of ribbons I ought to mention that this particular type is a bit of a security risk, I'm sure readers of QLTR are not into revolutionary propaganda or seditious literature, but if you are don't use the HR5 ribbons, they read like ticker-tape!

I would be delighted to offer some fancy screen dump routines, like all these other expert programmers. Snag is, everyone is a better programmer than I am, even the cat!

I have used the HR5 on the Spectrum with a variety of commercial programs, fonts, and graphic routines. It has coped remarkably well with them all, and I am sure in the hands of a competent QL practitioner it will do equally well and very probably better.

George A. Jones

EDITORIAL COMMENTS

I'm pleased that George has finally got his Brother HR5 up and running with his QL. I must say that the advice given in QL User/World was extremely confusing and contradictory, and am very thankful I do not have one of these beasts! Still, we at last have the definitive answer to some of the problems with this printer.

If any of our readers are able to provide the necessary information to enable George and other Brother HR-5 users to do screen dumps then please do write in.

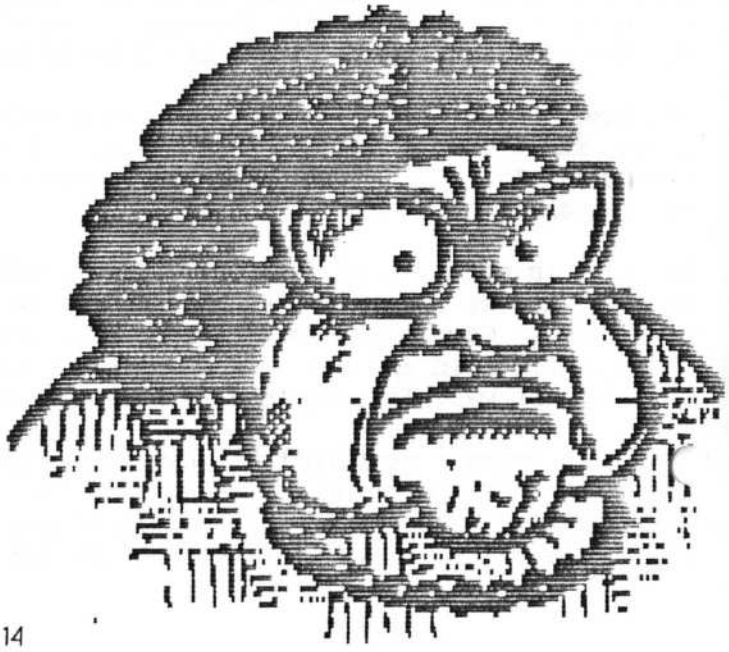
We shall be running more of these features in future editions of QLTR. Interfacing the QL with printers is probably one of the most complicated things about the QL and is something we can all help each other with by sharing our knowledge with other QLTR readers.

Also I'd be very please to put all manner of printer driver software into the C.G.H. Services Public Domain Library. Considering the amount of time we all spend sorting out Quill translates etc, it would be of immense benefit if we could have these available for the less technically minded.

Users of the brother HR5 may well be interested in Nick Ward's "Polytext" which will enable multiple column output of Quill documents.

Richard

AN EXAMPLE OF ST CLIP ART TRANSFERED TO THE QL. (PRINTED USING EMMANUEL VERBEECK'S IMAGIX PROGRAM ON A PANASONIC KXP-1124)



HOW TO PRODUCE CLIP ART FOR THE QL FROM ATARI ST PUBLIC DOMAIN DISKS

By Keith Reader

Desk Top Publishing has held a fascination for me ever since I saw it mentioned in the computer press. I had my first opportunity to use it when my son bought an Atari ST and I managed to borrow a copy of Timeworks for it. Long hours were spent pouring over the manual before any sensible product could be produced. The main problem however was that my son was anxious to do his own thing with his ST so reluctantly the software was returned and I reverted back to my Spectrum and 128K QL. Through the columns of the Micro Mart magazine I managed to obtain a copy of Front Page for my QL but after using Timeworks I could never really raise any enthusiasm for it.

At last I managed to up-rate my QL to 640K with twin disk drives and I now had the potential to try some proper desk top publishing on my own machine. A quick phone call to Sector Software and I had a copy of Page Designer 2. What an easy program to run, it hardly needed a manual and although not as powerful as Timeworks it was only a third the price. Excellent value for money!

Then at the 3rd Northern Home Computer Show Digital Precision were making some excellent offers so a copy of Desktop Publishing Special Edition was purchased. Not so easy to use as PD2 but again it produced excellent results. This time I only paid a quarter of the Timeworks price. There is no doubt that the software for the QL is usually a bargain when compared with other computers.

I now had two programs with many font styles and different formats but the other main ingredient that was missing was some clip art. On checking there seemed little of it available. Now as an artist I am useless and I mean useless. I had an attempt with Eye-Q but the results were pretty grim.

I then saw that CGH Services were advertising some clip art so a quick telephone call to Richard Alexander and the opportunity to borrow my son's ST for short periods resulted ultimately in the production of this article.

From CGH Services I obtained two public domain programs which enabled me with some trial and error to successfully transfer ST clip art into a QDOS format that enabled it to be loaded into the desk top publisher programs for the QL.

Now to the main object of the article (at last) how to transfer ST public domain clip art into a suitable form for use with the QL. I should make clear at this stage that the following description of operations is very detailed. I have found all too often in articles or manuals the instructions are at times vague and when I try to carry them out the system fails as I do not fully understand what I should be doing. So for those of you that are talented and do not need so much detail please be tolerant and if necessary skip the bits that are obvious.

<u>THIS IS WHAT YOU NEED: Hardware and Software.</u>

Atari ST Computer
Public Domain clip art disk/s
The public domain program for the Atari called "Pic.switch.7"

Sinclair QL with Disk drive (I don't think that extra memory is absolutely necessary).
"QDOS/TOS File Manager" by Stefan Schmidt and "Turbo_ST_QL" by Alan Pemberton and Rich Mellor. Both obtainable from CGH Services.
(You can also use any other ST-QL file transfer prog to port files to the QL, but "Turbo_ST_QL" is the only prog we know of that currently makes sense of ST grphix files.)
Digital Precision's "Eye-Q" program or other QL art package (I use the Eye-Q program).
Two blank disks

THIS IS WHAT YOU DO.

Using the Atari ST
The clip art screens on the Atari need to be in Neochrome format medium resolution. Use the program Pic.switch.7 to enable you to change, if necessary, the format of your Atari clip art into this form.

Copy the clip art screens onto a disk using the above program. As they use about 32K you can get about 20 screens on one disk.

Switch off the Atari ST and move to the QL.

Using the QL.

CHANGING THE FORMAT FROM TOS TO QDOS

Format the two blank disks.

Load up the QDOS/TOS File Manger using Exec flpl_ST_QL_exe
Use F3 TOS Directory to obtain a list of file names and the actual file size in bytes. Make a note of these on paper.These are important as they are required later in the operation.

Put a blank formatted disk in drive 2 if you have twin disks or have it ready to put in drive 1 if you only have a single drive. From now on I will assume you have twin drives. You will have to work out your own method if you have a single drive.

Press F1 TOS - QDOS
Type TOS filename <ENTER> neo <ENTER>
Type FLP2_filename
Each screen now transfers from TOS to QDOS format
Repeat the operation for each screen on disk.
When the whole disk has been transferred (or if you want to test the system just one or two screens)

RESET THE QL.

CHANGING THE SCREENS TO QDOS FORMAT

We now move onto the Turbo_ST_QL program.
This program automatically stops after each screen transfer so to save loading it from floppy disk each time it is best to set it up in a Ram disk.

This is the procedure I use. I don't profess to be a Whizz Kid so there may be better ways but at least this one works.

Type the following BOOT program:

```
10 Format Raml_100
20 Copy flpl_turbo_st_ql to raml_turbo_st_ql
30 Copy flpl_st_ql_bas to raml_st_ql_bas
```

Save to disk, of course, as Flpl_boot.

Run the program (It will, of course, autorun when started from reset in future)

When the cursor reappears type "NEW".

Now type the line

```
10 Exec_w Flpl_turbo_st_ql  <ENTER>
```

Put the second formatted blank disk in drive two.

Type "run"

"ST_QL Picture transfer" appears.
enter FLP1_"filename"

The program now asks for the OFFSET
This is where you require your file length from your TOS directory obtained previously.
To obtain your offset take 32000 from the file length. The usual figure is 128.
Enter your offset figure.
Enter your destination drive and file name. I always add the suffix _scr to my screens at this stage to show that they are now usable QDOS files. i.e. FLP2_filename_scr.

The program now draws (slowly) the screen on the monitor. There are two points here, the Atari screen is wider than the QL screen so some of the figures are lost on the right hand side. Also the colours are usually wrong but don't worry about either point at this stage. Once the screen is drawn the file is saved to the new disk in drive 2. Continue until all the files have been transferred.

TIDYING UP THE SCREENS WITH EYE-Q

The screens that have now been produced require some editing to make them tidy. I use Eye-Q for this but I presume that any QL art program will suffice.

To load the screens Press F3 and choose "Files"
select "Load Area"
type "Device_Name_scr"

The chosen screen should mow be on view.

To recolour the screen Choose "Manipulate Screen"
select "Recolour Area"
choose "Complete Screen"
By using the cursor keys and the space bar.
change Black to White
change Red to Black
change Green to Black
change White to Black
ESCape
The screen should now redraw in monochrome.
Press a key to confirm the colour change.
ESCape, ESCape again
You should now be in the draw mode.
Enlarge the cursor by using CONTROL W and S
Use F1 to move to the set mode.
Now using the cursor erase the shapes which have been chopped off on the right hand side of the screen.
press F3 and choose "Files" again.
choose "Delete" and delete the screen file on the disk.
Choose "Save Area" ,"Whole Screen" and "not compressed" to save the completed screen.

OTHER POINTS TO NOTE.

It usually takes about 3 to 4 hours to completely convert a full disk of screens.

If you want to see the missing right hand side of the screen change your offset when using the Turbo_st_ql program. An offset of 400 or 500 usually shows the missing area.

When the screen is converted the vertical axis is compressed somewhat so that the figures are slightly distorted. I have not found this a problem but if you are unhappy

with the result you should slightly stretch the vertical axis using an art program on the ST before any transfer is attempted.

To build up screens using the missing right hand side drawings you should produce new QDOS screens with the Turbo_ST_QL program and when they are loaded into Eye-Q cut out the individual drawings and save them to disk. These individual images can then be imported onto a blank screen and a complete new screen built up. This is a labourious operation.

HOW TO USE WITH THE MAIN DESK TOP PUBLISHING PROGRAMS.

USING WITH PROFESSIONAL PUBLISHER

If you have twin drives the clip art disk can be used in either flp1_ or flp2_. The screen is manipulated exactly as with the art screens supplied with the program.

Loading a screen and cutting and pasting.

Use the following sequence:

On main Menu choose "5 File Handling"
then "3 Load Picture"
choose "1 SBYTES screen"
Type "Device_Name_scr"
Draw Window around image required.
Press <SPACE>
ESCape to Main Menu
choose "1 Edit Page"
select the area of page where you wish to paste.
Press <SPACE>
Move the cursor to the top left hand corner of
where the image is required to be drawn.
Press F4
choose "1 Paste Picture"
when the image is pasted press <SPACE> to accept.

It is possible with most of the images to cut them out from the screen without touching any of the other figures. If when an image is pasted it contains part of an adjacent image it is possible to erase this by going to the Text Mode, drawing a box around the part not required and using the "clear box" part of the menu.

USING WITH DESKTOP PUBLISHER - SPECIAL EDITION

If you have twin drives the clip art disk can be used in either flp1_ or flp2_. The screen is manipulated exactly as with the art screens supplied with the program.

Loading a screen and cutting and pasting.

Use the following sequence:

From the Main Menu Choose 9) Load in Picture
then 1) Full Screen
type "Device_Name_scr"
Draw Window around image required
To CUT Press Control/Shift/V together
ESCape
Choose 1) Edit current page
Move to section of page required
Press <SPACE>

Move cursor to location required
To PASTE press Control/Shift/X together

It is possible with most of the images to cut them out from the screen without touching any of the other figures. If when an image is pasted it contains part of an adjacent image it is possible to erase this by going to the Text Mode, drawing a box around the part not required and using the "clear box" part of the menu.

USING WITH PAGE DESIGNER 2

This program uses clip art in a somewhat different fashion than the above publishers in that it uses images previously saved to disk/microdrives. Furthermore it uses black paper rather than the white paper used in the other programs. In order to convert the clip art screens into the individual cut images required for the PD2 the following procedure can be used.

From the Main Menu Select "Files"
then choose "Merge/Save Screen"
Type y in response to "Merge QL Screen (y/n, n= Save QL Screen)?".
Select page position <ENTER>
Enter file name "Device_Name_scr"
Screen then loads.
ESCape to Return
Return to Main Menu
Choose "Cut And Paste"
Select "Cut"
Choose image required and locate and size box as necessary to cut the image.
Choose "Paste"
Move around the page to a section which is blank and paste the image onto the page.

Note that the image is now white paper on a black page. To inverse the image use the following procedure.

Still under the "Cut and Paste" heading choose "Window".
Size the window to cover the white background of the image. It is not necessary to have the box exactly the same size as the image if necessary ensure that it is larger.
Press F1 to Inverse the window. You should now have a white image on a black background.
Select "Cut"
Cut the recoloured image.
Choose "Save Paste Buffer" and save the image to disk.

To complete the operation of transferring the clip art screens into a series of cut images it is necessary to carry out the above operation for each image required.

It is possible with most of the images to cut them out from the screen without touching any of the other figures. If when an image is pasted it contains part of an adjacent image it is possible to erase this by moving to the main menu and using the eraser option to tidy up the image.

WHAT TO DO IF YOU CANNOT OBTAIN ACCESS TO AN ATARI
or if you are too lazy to carry out all the hard work.

The answer to this is to buy the Public Domain disks that have already been transferred. These are available from CGH Services direct.

The disks available to date are:-

1. SPORTS - A collection of images from all types of sport.
2. WHIMSYS - A series of screens with a collection of whimsical cute animals
3. OFFICE - Images of office life and equipment.
4. VIZ - 17 Screens of characters from the modern comic of the same name.

More disks are being transferred and should be available shortly.

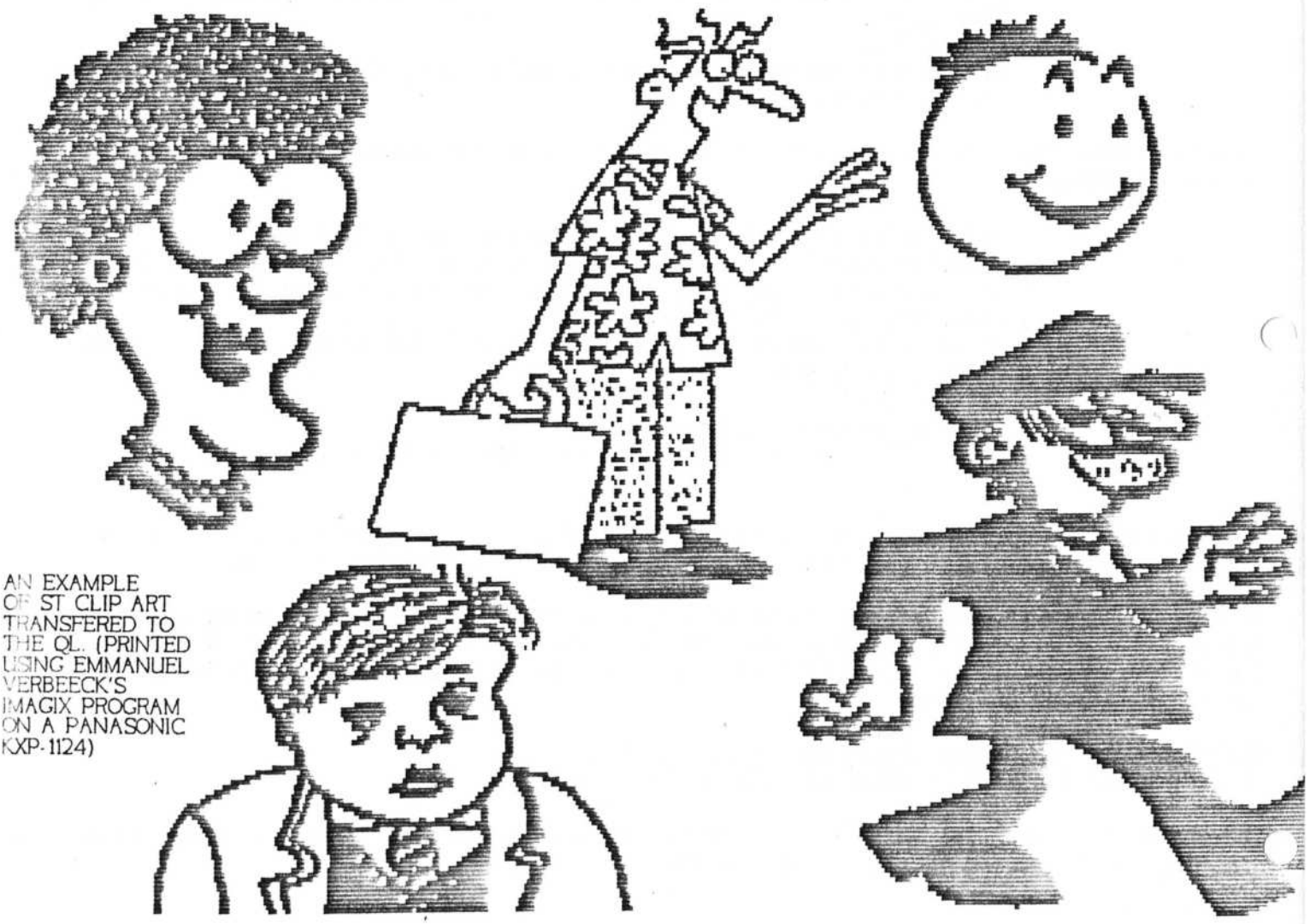
ADDENDUM

Since Keith wrote the above article, for which many thanks are due to him, there have been a couple of interestiing developments:

1) Alan Pemberton has been busy at work on an Image Processor Program which will, hopefully, make the manipulation of screens, especially imported ST ones, a much simpler procedure.

2) PROGS, in Belgium, have published "The Painter" program together with a set of 3 disks of compressed clip art. The Painter prog and the set of clip art disks each cost £30.00 each (& 10% P&P) and are available from CGH Services. (It may take a little time to obtain copies as we do not usually keep a stock of third party publications. There is also the hassle involved in sending money to Belgium to pay for the progs.

We hope that Keith will be able to review the Painter and the clip art in time for the next issue of QLTR.



AN EXAMPLE OF ST CLIP ART TRANSFERED TO THE QL. (PRINTED USING EMMANUEL VERBEECK'S IMAGIX PROGRAM ON A PANASONIC KXP-1124)

NOTES ON DISKS AND DISK DRIVES

INTRODUCTION

In preparing this issue I received several interesting bits and pieces relating to disks, disk drives and memory expansions, so to make life easier for readers I've pulled them all together into one section.

First up is an extract from one of Geoff Wood's letters and is his personal views on the suitability of Trump Cards...

"Warning to potential disk interface buyers. Trump card will severely restrict your QLs expansion capability. The extra RAM offered is at the expense of the predefined memory areas set specified for up to 256K of "real" QL devices or ROM, leaving only the built-in ROM port for access. It could be argued that with a Miracle" system you will have all you could ever need, but their hard disk is a rather expensive way to go, and a full SCSI interface would future-proof your QL (thinking optical drives etc here .....). Other excellent "card" peripherals such as QEP-3 EPROM programmer, Qflash or Spem 192K ROM cards, Rebel or CST expansion frames, etc cannot work with the Trump card.

W.G.Wood"

Next up, some news of interest to those people using Medic Interfaces:

Michael L. Jackson has been busy and has sent into the C.G.H. Services Public Domain Library his revision of the Medic Disk software, which enables it to use 'flp_' as the device name. He has also revised the manual that came with the i/face. Anyone requiring a copy of this should write into us with a disk and a quid to cover copying charges. We'll let you know of anything else that will help Medic users.

The next item will be of interest to readers who have bought second-hand Silicon Express disk interfaces.

Roy Gower recently wrote to QUANTA asking for help with their newly purchased Silicon Express disk interface which he had been sold without the benefit of the manual.

Luckily I still have and use my Silicon Express i/face and found the manual resting in one of my QL User Guides. As the user had failed to get hold of Silicon Express (I believe they went out of business a couple of years ago) I didn't feel any qualms about supplying the manual and later the utilities disk which should go with the disk interface.

However Roy couldn't get the FLP_EXT command to work. This confused me until I worked out that it referred to a non-documented feature of the Silicon Express i/face - it has a Toolkit ROM on board which is like a cut-down Toolkit2. I've no idea how standard these are - but it looks as if Roy has a disk i/face without the Toolkit which'll make it rather difficult to utilise fully. The ROM is initilaised by FLP_EXT and by typing EXTRAS a listing of all its commands can be viewed. If a replacement ROM can be fitted it should be O.K. but I fear his bargain may have proved rather a waste of money.

If you have problems with a disk interface on the QL it is quite possible that other QL users have been there before you and that readers of this paper may be able to help you. On the other side if anyone has any disk utility software belonging to specific disk interfaces that are no longer available, do send them into the Public Domain library where they may be of use to other users.

Next some news from Dave Fullerton for those with 256K Trump Cards.

You can upgrade to 512K or 768K memory simply by purchasing 41256-12 chips from Silicon City where they cost £2.10 each (VAT incl) or Jade Marketing for £2.00 (+VAT). For each 256K you need 8 chips and can very easily fitted. (Don't forget to disconnect from the mains first, and make sure the chips are firmly socketed.)

Dave has also sent in this review of Miracle System's Disk Adaptor.

MIRACLE SYSTEMS "DISK ADAPTOR"

PRICE: £15.00
FROM MIRACLE SYSTEMS LTD., 25 BROUGHTON WAY, OSBALDWICK, YORK, YO1 3BG
(TELEPHONE: 0904 - 423986)

This is intended to be used with the "old" Trump Cards and enables the user to access up to four drives. This is ideal if, for instance, you are going to use something like "Conqueror" and can configure one set

of drives for MS_DOS and the other for QDOS.

It is straight forward to install. However, you will need to remove the cover of the Trump Card to install a 1.28 ROM (or later version). If anyone is reluctant to do the job of removing the old ROM out, those wonderful people at Miracle will do the necessary for you. Once the ROM is installed (an upgrade is supplied with the "Disk Adaptor") and the cover replaced on the Trump Card, you are ready to fit the "Adaptor". This consists of a printed circuit board which has a plug that fits into the Trump Card drive port and two drive lead sockets. The socket on the top of the circuit board controls Drives one and two, whilst the the socket on the end of the circuit board controls Drives three and Four.

The beauty of the "Adaptor" is that you do not have to configure drives three and four.... they remain as flp1_ and flp2_. However when you access them, they respond to flp3_ and flp4_ respectively. This is a great idea as it may not be convenient for the user to have a four drive set-up installed permanently, i.e. two computers each with their own twin drives.

To quote from the very easy to follow instruction sheet supplied with the Disk Adaptor: "The middle connector is wired for flp1_ and flp2_. However, the select lines DS2 (flp3_) and DS3 (flp4_) are now functional and are the same as lines DS0 and DS1 respectively on the left most connector." "Duel drives configured as flp1_ and flp2_ can be accessed as flp3_ and flp4_ simply by inserting the drive cable in the left most connector."

One extra with the v1.28 ROM is that wmon and wtv now have their defaults back, found to be missing in v1.27(m).

I received the "Adaptor" and had the upgrade ROM installed and all four drives working in a matter of 10 minutes. Value for money? I don't know how Miracle can do their "Adaptor" for the price!

Dave Fullerton

And finally for this issue we have Carl L. Cronin's Introduction to Disk Drives and in particular how he built up a very respectable system for £50. I look forward to receiving further items on disk drives for the next issue!

QL Disk Drives An Introduction

When I first brought my QL, about a year ago, I looked forward to the microdriv storage! At last, I thought, I can get a directory and not wait twenty minutes, as with cassette tape. However, I discovered microdrives are unreliable, slow and very expensive. This coupled with the fact that they were not being made anymore prompted me to get disk drives - on the cheap.

Since I am still at school, I could not afford to go out and spend £200 on drives. I thought I was stuck. Then the local ICL offices were having a clear out and not wanting all their old computer junk, dumped it at my school! The pile, which was about a metre high and took up nearly half a room proved to be a lot of hassle for my teachers, so they called in a computer scrap dealer, to get rid of the lot. Before it went I had a good scroung and came up with an old broken CPM type wordprocessor with drives!

I took it home and opened it up. The case housed 2 Suggart 80 track 5.25 inch discs, a circuit board and a power supply. I pluged it in and it chugged into action, a whining noise coming from the drives when I inserted a disc. I found it interesting that they actually work when not connected to the computer, this proves that drives really are seperate computers. I ripped out all the wordprocessor circuitry, a damaged PCB and a load of wires and I removed a small panel in the back of the case, to take the cable for the QL.

All I needed now was the cable and an interface. I put an advert in Micromart and on the first day of publication recieved 2 phone calls for 3 interfaces ranging from £25, for one I had never heard of, to £45 for a Cumana one, from someone who had upgraded to a Trumpcard. I took the Cumana one, and since the person selling it lived 250 miles away, I had to take a risk and trust that it worked. The next day I gave Dennis Briggs, of Adman Services (09522-55895) a ring, and for a fiver a cable was mine, as well as a lot of useful information, of which more later.

By the end of the week I had 2 working disc drives, giving me 1440k (720k per drive) on-line at any time and of course much faster than microdrives! I ordered 100 discs from the cheapest source I could find, M.D Office Supplies. It cost £28

including postage and a disc case. So for a total outlay of £78 I have two drives and 100 discs, not bad going really!

If you want to get drives on the cheap, I would reccommend putting an advert in Micromart for an interface. Don't get the Quest ones they aren't very good and need seperate software loading in from microdrive every time they are used. Before you get the interface, make sure it has a QJump ROM, that is the standard for QLs. If it's a Microperipherals Interface, ask if it's got the QFLP upgrade. The reason is that the original MCS interface does not support direct sector accessing, so programs such as DiskOver and Solution will not work. The upgrade, a 15 pound ROM chip available from Care Electronics (0923-672102) will take care of this, since it is a QJUMP ROM. Don't pay more that about £50 for an interface, £35 is about right.

Once you have the interface drives can be brought from a number of suppliers, an example being Morgan Computers in London (phone 01-255 2115) or from one of the many computer auctions that take place every month. You don't actually need Suggart drives, just ones with a Shugart compatable interface, these include IBM ones, BBC ones and most others.

Most drives that are picked up are 5.25 inch 360k per disc (double sided). They are usually ripped out of PC's when the owner decides to upgrade to 3.5 inch or higher density drives. Disk drives shouldn't cost that much. If you look in magazines such as Electronic and Wireless World, some suppliers offer 3.5inch DS 80 track drives for £35. An example being Matmos Ltd, tel 0444-484258, offering NEC 3.5inch DS80 track drives for £32.50. If possible try to buy a suitable power supply from the same supplier as the drive, that way if you get into trouble, they can't pass the buck to someone else! A note about drive density, according to Dennis Briggs, all disks are the same, 40 track, 80 track etc. The only difference is that they are tested at lower densities. The disks I brought were actually double-sided, double density, and were about 25p each and so far, after over four months use, not one has failed.

Oce you have disks, it is worth thinking about QJUMP's SuperToolkit II (or TKII), if it's not built into your interface already. TKII adds lots of useful features to the QL, and since it was written by the person who wrote QDOS, it can be taken as his, Tony Tebby's, vision of what the QL should have had in the first place, had Sinclair's Marketing Director not been in such a rush to get an unfinished machine out of the door as quickly as possible. It adds features such as wildcard copy and a lot of other extremely useful features, such as a full screen editor, see the article by Richard Alexander in QL Technical Review number 1, and Stephen Bedford's series of more detailed articles starting in this issue for more information. TKII is available from Care Electronics.

Well I hope this short article has inspired all of you with only microdrives to upgrade. I think that loss of microdrive production would a very sad blow to the QL Scene. Hopefully not too many users will leave the QL because of it.

Carl.L.Cronin

HELPLINE

Disk Drives

Jean-Yves Rouffiac asked in a recent letter whether I knew of anyone who could provide an interface or adaptor that will enable him to connect his existing twin 3.5" disk drives - currently connected to his QL (presumably using the standard Shuggart connectors) - to his Commodore Amiga. The pin-out for the Amiga external disk connector is given in the Amiga 500 manual. Typically it is non-standard, with 23 pins. One interesting point - it appears to be configured for 3 external drives - although most set-ups only have a single 3.5" drive.

As to the answer, I suspect that Dennis Briggs of Adman Services would be the best person to contact - he made me up a little external power supply for an external ST disk drive with no problems.

I have also had a reader with problems with a Dattel disk interface. He very kindly sent me a photocopy of the manual . The interface appears to work with double-sided 80 track drives - but formatting at only 360K per disk. If anyone is successfully using a Dattel interface - we'd like to hear from you!

LETTERS PAGE

LETTER FROM IAN THOMPSON

I recently bought the latest Trump Card 768K package from Miracle Systems, partly due to the microdrive cartridge supply problems and partly due to a bit of good luck concerning football! I had read good reviews about the interface and was, in any case, becoming annoyed that every Quill document was limited to about 1100 words before mdv2_ began to operate almost constantly.

Having had over four years of reliable, unexpanded computing you can imagine my dismay when upon plugging the Trump Card into my QL (D15 JS ROM), connecting the power I was presented with a totally locked-up machine, with no sign of a memory test and certainly no "F1...F2..." starting screen. As the QL worked with just about every port except the main expansion socket connected, I suspected a fault had occured on the interface and sent it back to Miracle for attention.

They quickly returned the board to me with a note saying that it was in perfect working order and the fault must be in my computer. They recommended that I contact TF Services about the problem and said that if a solution was not found then a full refund would be given.

Tony Firshman suggested that I try other power supply units and interfaces with my QL before sending it to him. He also suggested that I remove the Q-Power regulator which I had fitted in September 1988. His reason was that the Q-Power can cause more problems than it solves, particularly the earlier version, leading to increasingly frequent "bad or changed medium" messages, especially from mdv2_. ("Besides", he said, "the QL was designed with a heat sink. It's the operator who gets bothered by the heat more than the QL").

I followed this advice and with the help of Arthur Nunn, one of two users I know in this area, I tested my PSU, QL, and Trump Card with his machines. This revealed that the faukt did indeed lie in my trusty QL, so of it went to TF for repair.

Within a week, it was back with me in a fully cured and expandable state. The problem had nothing to do with the edge connector, a dry solder or cut PCB track, but instead with the 68008 CPU. The remedy was to swap the original chip with one with gold plated pins to give better connections. As well as this, the microdrive units were swapped over, which stopped #2 playing up occasionally. The repairs were covered by a 6 month guarantee and the bill came to £25. With service and prices like that I hope TF Services is busy for many years to come.

This letter is not one of complaint, though it may have sounded like that in parts, but is instead one of thanks to everyone concerned for helping my QL get onto its little plastic feet again, and for finding the solution to a rare, if not unique, problem.

Ian Thompson

LETTER FROM JOHN VENNARD (EDITED)

I have recently received the latest Minerva ROM upgrade. I am now on v1.76. It is very rapid and all the complaints about presentation are now redundant. I wil have to spare the time to give our friends at QView a pat on the back for the improvements that they have made to the new ROM.

One comment Rich Mellor made in passing and something that I had experienced in the later stages of the original Minerva was the locking up of the QL after the machine had been on for some time. I know that all other users seem to experience lock-up from time to time, but my AH machine just doesn't do it no matter ho warm it gets. I am now waiting to see what happens to the latest version.

I managed to get hold of a hard disk from Miracle Systems but it didn't suit me, unfortunately. The fan was extremely noisy and my wife objected to the disk being on over night. This rather defeated the object, so I returned the machine to Miracle. Another problem experienced with both machines was that on enabling the winchester extensions, the letter f disappeared from the keyboard and the capslock didn't work. Even a reset couldn't solve the problem. Each powering up produced the same result. No one seems to be able to explain this phenomenon.

Miracle have done me a nice refund of the difference between the hard disk price and a new trump card. Very sporting of them.

John Vennard

BARGAIN SOFTWARE PACK

NKWELL DELUXE TYPER with 30 Fonts
CUEWELL 1
CUEWELL 2

£10.00 3 1/2 disk postage paid.

from Rob-Roy Software, 94 Teignmouth Road, Clevedon, Bristol BS21 6OA

I am pleased for once to come across some software which lives up to its title. 'Bargain Packs' usually consist of amateurish software which seldom amounts to 'value for money' and generally they are best avoided.

This package consists of three very professional pieces of programming, all of which would probably be in daily use for most Q.L. Owners.

INKWELL DELUXE with INKTYPER:

Many of you may have read previous reviews of this unique software. But for newcomers, ere is a brief rundown.

The first part of the program consists of a utility which con convert any existing Quill_Doc or ASCII _lis into any one or more of 30 different fonts. Thus the heading could be in ROMAN, the bulk of the text in DATA70 (a futuristic font) and occasional sub-headings in say STENCIL. (up to four different in each Doc).

Even if you don't like the existing comprehensive selection of fonts then you can either design your own or just squeeze, stretch, rotate or otherwise manipulate the ones supplied.

All this is done quite quickly and simply by adding different control codes to the _doc you propose changing.

There is a preview mode which allows you to inspect your work, prior to printing. In addition, the baud rates and bit image modes can be changed to suit any type of popular printer.

INKTYPER:

Press a button when you are in Inkwell and you are immediately transformed into Inktyper. This is an extremely useful utility which straight away changes your printer into a direct-type Typewriter. The screen display emulates a modern computerised typewriter and allows you to see a line of type before pressing <RETURN> and having it printed on your printer.

All the usual margin settings are availible together with use of any of the 30 supplied fonts. (again, any four of your choice may be used without loading them).

You also have the choice of print density, draft or superprint, line space, italic, condensed, enlarged and a host of other useful facilities.

Absolutely ideal for those quick letters, and it loads in seconds compaired with Quill.

CUE WELL 1

These are two excellent front end utilities.

CUE WELL 1 is a menu driven program which produces a directory of microdrives or floppy disks. It works with EXECutable programs, machine code or superbasic. It can even identify the type of program without the suffix i.e. _bas, _bin or _exe.

Having loaded it via a short Boot program, just type CW <ENTER> and voila, it pops up.

It produces a clear alphabetically sorted directory of all files on the required medium, and also shows each file size in sectors. (It can display the first 104 files on any medium). A greatly added bonus is that it can print out all of these file names for you.

CUEWELL 2

This is a development of CW1, but in addition allows you to copy, delete, rename,load,run, call or exec any file. You also have the facility to put a 'tag' description against each file.

The whole thing is configurable to your own specification.

I find both of these ideal when created as a BOOT to a 'Data' disk or the Psion suite.

The documentation to all these programs is extremely easy to follow and makes this little 'bundle', easily the bargain of the year.

John Shaw.

FUTURE ISSUES OF QLTR

It looks as though this magazine has established itself as a useful forum for QL users, although it isn't yet a competitor for QL World or even QUANTA.

We have several series of articles lined up for future issues: Rich Mellor's on machine code and the beginning of one on Turbocharge; Michael L. Jackson on QL financial programs and PC Emulators - including compatibility problems and Stephen Bedford on SuperToolkit II. Please note that we welcome input from other readers on these subjects as well!

Among the programs we hope to be reviewing in the next issue are Dilwyn Jones' new progs and The Progs team's The Painter and Clip Art and DataDesign - a database program. Review copies of these are available - just drop me a line for details.

I've been promised an evaluation of Rainer Kowalick's Amiga QL emulator. If anyone has an Amiga I can supply this - just send a couple of quid and a blank disk. It is usually supplied with 2 QDOS disks of support software. As I suspect readers will already have most of this software, or functional equivalents, I'm not distributing the support disks. However any known PD progs on the disks that are useful (including the VT100 emulator), will be added to the PD Library in the usual way.

A few readers, including Chris Adams, have suggested some ideas for future articles in QLTR. These include explanations and evaluations of RAMDisks and hard disks; using QRAM (and now QPAC2); review of the ST QL emulators; other front end systems - such as Taskmaster and Ice; reviews of Text87 and associated programs; SuperBasic - getting started and also programming hints and tips and finally "how to keep your progs compatible with all known QL hardware variants and add-ons".

Having said which there's probably no limit as to the areas of interest which you can write about. It doesn't really matter how obscure the article is - as long as it is readable and related to the QL. Considering the number of items QL World has never published articles on, our scope is practically endless.

Richard

HELPLINE

TinyTool Kit:

Jon Pennycook has a query on this. He finds that if he types in PRINT RAND(mdv1_) and then PRINT RAND(mdv2_) he gets the same answer. Is this normal ?

NOTES ON USING SUPER TOOLKIT II

BY STEPHEN BEDFORD

Part 1

INTRODUCTION

Super Toolkit II (hereafter referred to as TKII) is a collection of over 120 additions to SuperBASIC. The additions might be considered to fall into two categories: those that extend the capabilities of SuperBASIC as a programming language (and as such would normally be used within a program) and those that enhance SuperBASIC's role as the command language of the machine (and would normally be used as direct commands). The manual supplied with TKII details all of the commands and functions made available, therefore rather than explaining every feature in detail, these notes are written as additions to the existing documentation. The section numbers are those used in the TKII manual. The numbering may appear inconsistent where a section has deliberately been excluded because it is covered sufficiently in the TKII manual.

Tony Tebby divides the facilities of TKII into three catagories: the two as described bove and that of development facilities. The latter category consists of just two commands which nonetheless transform the QL. The TKII manual explains these fully in section 3, however brief notes follow.

3.1 ED - SuperBASIC Editor

ED is a SuperBASIC window-based editor (ie one can use any portion of screen required by setting the size of #2 appropriately or by using another channel, eg #3 and using the command ED #3.) Note such a channel should be opened as a console device not a screen device ie use OPEN #3, con. This is true whenever a channel is required to accept input as well as output to screen. A console device is the combination of a screen window and a keyboard queue.

3.3 Viewing a file

VIEW is used to display a file. It is similar to TYPE as used in many other operating systems (eg MS-DOS and VMS).

COMMAND LANGUAGE EXTENSIONS

The Sinclair QL is a computer that is exceptional because of its inbuilt software: both the operating system, QDOS, and its programming language, SuperBASIC. QDOS even now has no rival amongst operating systems found on affordable small micro-computers, whilst many of the advanced features of SuperBASIC have yet to be seen in any other implementation of the language. What must be remembered is that on a machine like the QL, the BASIC is not just a programming language bundled with the computer but is the command language of the machine. It is this aspect of the language that is lacking. Without resorting to the use of machine code it is possible on a QL to run several jobs concurrently but it is not possible to alter the priority of these jobs or to remove them or to see what jobs are currently on the machine or to see what state they are in (active, suspended or inactive). It is also not possible to see how much free memory is available on the machine without using PEEK. Super Toolkit II rectifies these and many more deficiencies of SuperBASIC.

4 Directory Control

Directory control is an area that certainly requires to be looked at in greater detail. There are two main difficulties when trying to understand this. The first is an attitude. The attitude being that if something is different from IBM it is wrong. The second problem is the complexities of wildcards as used in QDOS. The first difficulty

can be overcome with time as one uses the features of QDOS (TKII should be considered as an integral part) and realises that it is a superior operating system to MS-DOS (the operating system most often used on IBM PCs) in so many ways. It needs to be different to be better. The second difficulty is best overcome by use of examples to illustrate the use of wildcards and by practice in their use.

4.1 Directory Structures

Refer to TKII manual plus examples below.

4.2 Setting Defaults

QDOS provides the user with the facility to set three directory defaults using the commands **DATA_USE**, **PROG_USE** and **DEST_USE**. For an unexpanded machine the defaults are mdv2_, mdv1_ and ser respectivel when the machine is booted. On a machine with floppy disk drive(s) the defaults are flp1_, flp1_ and ser.

The DATA_USE default is used for most filing system commands eg LOAD, LRUN, MERGE, LBYTES, SAVE etc.

Thus, one could set the default for data as follows:

```
DATA_USE flp1_basic_
```

Suppose the disk in flp1_ had the following files on it:

```
basic_mandelbrot_bas
basic_prime_bas
basic_game_bas
pascal_trig_pas
pascal_trig_rel
pascal_trig_bin
pascal_game_pas
pascal_game_rel
pascal_game_bin
letter_qjump_txt
address_qjump_txt
```

After setting the data default as above, a directory listing using dir would look like this:

```
basic_mandelbrot_bas
basic_trig_bas
basic_game_bas
```

While dir flp1_ would show the full contents of the disk.
If we wished to know about all Pascal associated files we would set the default to flp1_pascal_. If we wished to see only files to do with games we could set the default as follows:

```
DATA_USE flp1__game__
```

A directory listing following using dir would now be:

```
basic_game_bas
pascal_game_pas
pascal_game_rel
pascal_game_bin
```

The data default has been set with wild cards. The string that makes up the default may be broken up into four parts:

flpl_ is the device name

_ is a wild card that means that represents any characters up up to the point where the next part of the default matches. Under different operating systems this part would be considered to be a directory.

game_ is the portion that follows an underscore (since this is where the preceding wildcard ends.) This might be considered to be the file name.

_ This is a second wild card. This could be considered to mean that any extension (conventionally indicating file type) is valid.

Thus the default is set to flpl_ followed by any characters up until a until a match with the next part of the default (in this example 'game') by 'game_' followed by any characters. That is any files of any type, called game on any directory on the disk. The idea of directory, subdirectories, filename and extension are used as an analogy with other operating systems with which many people are familiar. It is perhaps better to think of these as discrete parts of a filename. However the first part of a full filename is always the device name, and it is good practice to have the last part (extension) indicate the type (eg _bas for BASIC files _pas for Pascal etc).

The important thing to remember is that an underscore represents both a deliminator between the parts of a default and wildcards. The general rule being that a single underscore within a default only acts as a deliminator, two underscores within a default represent one deliminator and one wild card. A single underscore at the end of a default my be considered as both a deliminator and a wildcard. Thus, in this example a default of **flpl__games_** would give the same directory listing, whereas **flpl_games__** or **flpl_games_** would show no files at all. We have not supplied a wildcard between after the device name and there are no file names that start flpl_games.
Note an underscore is automatically appended to a default if it does not already end in one.

If we set the default back to flpl_basic_. We could load the mandelbrot program simply by typing:

```
LOAD mandelbrot_bas
```

Note it appears that for commands other than DIR wildcards within defaults do not work. That is to say, the name appended to a command such as LOAD is tagged onto the end of a default rather than replacing a wild card. This avoids possible ambiguities. Also commands other than DIR need some part of the file name appended to them. One cannot set the default to **flpl_basic_games_bas** and type **LOAD**. This will result in a 'bad parameter error'.

PROG_USE is used to set the directory for executable code and as such is only used for EXEC, EXEC_W and the TKII commands EX, EW and ET.

Thus, continuing the example used above one could set the program default as follows:

```
PROG_USE flpl_pascal
```

and then execute one of the programs as follows:

```
EX trig_bin
```

Note the TKII command EX may be used excatly as the standard EXEC but as shall be seen later can also be used in different ways.

DEST_USE sets the default destination for commands such as COPY and RENAME (TKII). This

is by default set to ser1 so that using COPY with only one parameter will result in a file being printed if a printer is connected via ser1.

4.3 Directory Navigation

The commands **DDOWN**, **DUP** and **DNEXT** provide another method of changing the data default (and the program default if it is the same as the data default). These commands allow the default to be altered relative to the current value as opposed to setting the default in an absolute manner as with DATA_USE. (Look at commands LINE and LINE_R page 32 of Keywords in QL User Guide for an analogy). Under an operating system such as MS-DOS with its single default directory a single command is used for changing the directory both relatively and absolutely.

The command **DDOWN** allows one to move further down the directory tree. That is, extend the data default. An underscore is automatically attached to the argument appended to DDOWN. Assume that the machine has just been booted so that the data default is flp1_. Following the same example used above, if one wished to look at only Pascal files one could set the data default using the command:

```
DDOWN pascal
```

This is equivalent to the statement **DATA_USE flp1_pascal**.

Now, if one wished to see only pascal source files, one could type the command:

```
DDOWN _pas
```

The underscore is used as a wild card. We wish to see all files with the _pas extension in the directory pascal. The data default is now flp1_pascal__pas_.

The command **DUP** does not take any arguments. It moves the data defualt up one directory level. In this case **DUP** would set the default back to flp1_pascal.

DNEXT allows one to move to a different default at the same level. If the current default is flp1_pascal__pas_ and one used the command:

```
DNEXT rel
```

Then the default would become flp1_pascal__rel_. One could then list the rel files (ouput from compiler). **NOTE** if one wished to set the default for the bin files (output from the linker) one could not type **DNEXT bin**. This is because BIN is an extension provided by TKII for using binary numbers. Therefore one would have to type:

```
DNEXT 'bin'
```

This prevents SuperBASIC form evaluating the argument. This is true of SuperBASIC commands in general not just the ones explained here.

4.4 Taking Bearings

One command and three functions are provided to allow one to find out the current defaults: **DLIST**, **DATAD$**, **PROGD$** and **DESTD$**.

DLIST lists the current defaults in the order data, prog and dest. As usual a channel number may be appended if one does not wish the output to go to window #1. As with other commands added or modified by TKII an implicit channel may also be used:

```
DLIST #2

DLIST \flp1_defaults
```

The three functions each return the value of the appropriate directory. For example:

```
PRINT DATA$
```

might result in flpl_pascal__bin_ being printed to the screen.

COMPARISON WITH OTHER OPERATING SYSTEMS

I shall finish the first part of the TKII notes with some comparisons between the commands explained thus far and the equivalents to be found on two other operating systems with which I have experience: VMS and MS-DOS. This is only intended for those people who use these operating systems and will inevitably make mistakes (eg. mixing commands from different operating systems) when they first come to use TKII.

	QDOS	VMS	MS-DOS
Examples of device names (note 1)	mdv1_ flpl_ ram1_	MUA0: MSA0: DUA0:	A: B: C:
Example file names	flpl_progs_a_pas flpl_a_b_c_pas	DUA0:[progs]a.pas DUA0:[a.b]c.pas	A:\progs\a.pas A:\a\b\c.pas
Wilcards (2) (single char)	_	* %	* ?
Display file	VIEW a_pas	TYPE a.pas	TYPE a.pas
Set directory (note 3)	DATA_USE flpl_prog PROG_USE flpl_prog DEST_USE flpl_prog	SET DEFAULT $DUA0:[prog]	CD A:\a
Change directory	DDOWN b DUP DNEXT c	SET DEFAULT [.b] SET DEFAULT [-] SET DEFAULT [-.c]	CD b CD .. CD \c (4)
Show current directory	DLIST PRINT DATAD$ PRINT PROGD$ PRINT DESTD$	SHOW DEFAULT	CD

1 This is not a table of equivalent devices - only QLs (and Spectrums) support microdrives and a VAX (machine that uses the VMS operating system) usually do not have floppy disks.

VAX - MUA0: is a tape cartridge drive
MSA0: is a reel to reel tape drive
DUA0: is a hard disk

PC - A: and B: are floppy disks
C: is a hard disk

2 TKII does not implement wildcards to represent just a single character

3 Only QDOS supports three seperate defaults.

4 This is only possible if c.dir is found on one of the paths set in AUTOEXEC.BAT. Otherwise one would have to use CD .. followed by CD c

"GRUNT" POWER SUPPLY PROJECT

When tired of the 4-foot-QL problem and desktop clutter, those with a little electrical knowledge often decide as I did, to condense their QL and various add-ons into a more sensible case, such as the commonly available "PC clone" one. This is an excellent occasion to install a more satisfactory power supply, given that the original is probably running a little too hot, and it is desirable to reduce magnetic fields near disk drives. The unit should be an SMPS (switch-mode power supply - these are very efficient and run cool) and should be capable of driving the whole computer, disks et al.

I found a suitable ready built unit for £12.95 at Henry's Radio, Edgeware Rd, and believe many similar units are readily available (also Matmos - watch "surplus" ads in electronics mags). The closed ventilated unit I bought (ASTEC AC9231-01) measures 60(H)x110(W)x200(L) millimetres, and can supply the following currents:

V1	12V @ 2.5A
V2	5V @ 6.0A
V3	5V @ 0.5A ('floating' so can be + or -)
V4	12V @ 0.5A " " " " " "

The input required is 230v @ 0.6A, which should be fused and switched in your new cabinet. Wires should be connected to the PSU with crimped "MOLEX" connectors although direct soldering to the terminals is possible.

The main 5V output should be connected to the leftmost of the three (removed) regulator connectors (looking from front), and "Ground" can be connected to the QL board on the front left pin of the expansion connector (try pin B1). The old regulator and heatsink are removed by unscrewing the heatsink and pulling vertically. Most of my add-ons needed only the +5V supply, so I connected this to the VIN pins (try B32) on the exp. conn. As cards expect an unregulated +9V, the on-board "3T" regulators must have pins 1 and 3 connected by a short length of wire, to effectively remove them. Although it is not the best practice to reticulate the +5V in this manner, all QL add-on PCB designs that I have seen have more than adequate gauge tracks to handle the current.

The RS232 ports, and some expansion cards, require +/- 12V, which can be connected to expansion connector on pins A30/31. The -12V is achieved by connecting the PSU's (V4) positive output to ground (0v) underneath the lip of the PSU. The other pin is now -12V with respect to GND. The fixed +12v and +5v outputs have sufficient power to supply several disk drives as well as the QL board.

My QEP-3 EPROM programmer was the one peripheral that needed the full +9v (or so) VIN supply. This caused a little head-scratching as I didn't want to pump the +12V into it (which would have been OK) as I was already using all the available 2.5A of current. I thought of a cunning stunt to generate +10V (a bit more gentle on the QEP) that did not siphon any of my marginal +12V supply.

The negative output of the (spare) floating 5V supply (used to generate -5V on some systems) I connected to the main +5v output, again under the "lip" on the PSU: 5+5=10 ! Now how to get it to the QEP. I decided to disconnect and common 2 otherwise spare pins on the exp. conn., the G and B (B17/18) colour signals. A wire was taken from these pins to the VIN pin on the QEP-3. Voila ! It worked.

This power supply is happily driving the following units, which with the aid of a small fan, are running reliably and cool in a metal case, with NO hardware related lockups in 4 months of extensive use:

- QL, QIMI mouse i/f, Schon PC keyboard + i/f, CST +6 expander frame and buffer board, CST SCSI disk interface, QEP-3 programmer, 512K Expanderam, 192K EPROM board, 20 Meg hard disk drive, twin 3.5" floppies, Miracle MIDI i/f, 12V mini fan.

I am pretty sure there are no erroneous instructions in here, but as I take no responsibilty for any foul-ups, please check all wiring is connected to where it should be. with an ohmmeter BEFORE powering up.

Geoff Wood

EDITORIAL COMMENT

Please note that the publishers of this publication take no responsibility for any damage you might do to your QL or yourself as a result of this or any other hardware modification you do to your QL or other computer equipment. If you find that the above article contains any inaccuracies please let us know as soon as possible so we can take up the problem with the author.

Richard

QL BOOKS EXCHANGE

This is more by way of floating an idea, rather than a 100% on-going concern.

As nearly all the books ever published about the QL have long since gone out of print, it has become very difficult to get hold of them. On the other hand, I'm sure that many QL owners (and even ex-owners) have books sitting on their book shelves which they never use.

The Oobvious solution is to set up a QL Book Exchange. This works very simply: if you want a book or have surplus books just send in a list, together with (if selling) the price required (incl U.K. postage). We can keep a record here of all the QL books and once we get a match between a "wanter" and a "seller" we let them know. Like our adventure helpline there'll be no charge for this but we'll need everyone sending in lists to enclose a least one s.a.e. so we can let them know if they have a "match".

Another reason why I'm interested in this is because I'm a librarian by training and a magpie by inclination so I'm slowly building up a library of QL books - but still have a wants list of nearly 50. Mind you this list includes some titles that I think were never published!

If you think this is a sensible proposal then send in your lists. At the very least, if you have QL books that you don't want - then send in a list - I may be interested in buying some!

Richard

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C.G.H. Services make no claims as to the frequency of this publication. Each issue will come out once there is sufficient interesting material available to make a viable issue, and thereafter subject to the co-operation of various unreliable second-hand pieces of hardware and also suppliers of other services.

Back issues of this magazine will be kept in print as far as possible, subject to the proviso above. There may be a short delay if demand outstrips existing supplies, whilst further copies are produced.

Please note that all opinions expressed in this journal are those of the author named. We ask all contributors to check their facts before sending in items to be printed. Where they have criticisms of QL related products I advise them to contact the originators of those products to confirm that problems are arising from the product and not from a misunderstanding of the manual etc. We will, of course, give ample space to any producers of QL related products who feel they have been unfairly criticised or who have subsequently improved their product to take account of criticism.

HOME BANKER UPDATE

I've received the following letter from David Wragg of D.J.W. Software regarding our review in QLTR3

Thank you for mentioning Home banker Plus in the latest edition of QLTR. I agree with the comments made about data loading and analysis.

Unfortunately, it is impossible to speed up data loading without slowing down the operation of the program, but since version 3.1 was produced, I have made a number of alterations to Home Banker Plus.

Version 4.0 has a completely new analysis section which enables you to look at all the categories and change them if required. This section also includes improved analysed statements and balances.

Other features that have been added include standing order print and improved search facilities. Home Banker Plus v.4.0 costs just £19.95 on 3.5" DSDD disc (memory expansion required).

People who already own a copy of Home Banker Plus v.3.1 (disc) can upgrade to the latest version for just £4.00. Other upgrades are available (prices on application).

I would be most grateful if you could include the above information as a postscript to issue three's article.

Yours faithfully

David Wragg,

D.J.W. Software, 11 Pound Close, Bramley, Basingstoke, Hants, RG26 5BL.

(tel: 0256-881701; fax: 0256-882750)

EDITOR'S BIT

We're always pleased to receive and print news of updates/upgrades to reviews we have printed. One of our aims is to provide a space for a dialogue between software writers and users. Any information that will be of interest or value to either is most welcome in QLTR. The next installment of M.L. Jackson's review of financial pakages for the QL should follow in the next issue of QLTR.

SMALL AD

As we're not a very freguent publication, I can understand if people don't advertise in this paper. However I thought I'd see if I can sell some of my stuff here.

SPECTRUM:
1 Beta Disk Interface (plus software): £15
1 RGB Interface (for Ferguson TX TV/Monitors): £15
150+ Magazines plus associated cassettes: £100 (Includes many rarities)
50+ games and utilities cassettes, all original: £50
All the above for £150.

PC:
150+ Magazines plus associated disks (5.25" 360K): £100
125 Business demo disks (5.25")(plus disk box): £50
75 PD disks (games, adventures and utilities)(plus disk box): £25
Universal Military Simulator, Jinxter, Hitch-hiker's Guide to the Galaxy, Gnome Ranger; Let's Make..(3 disks), plus Clip Art (2 disks): £5 each (disk) or £40 for the commercial progs.
Grand total of £200 for all the PC stuff.

ST:
SwiftCalc (Timeworks): £20
ProSound Designer (incl Digitiser Hardware): £30
Image Scanner (fixes to print head): £25
Cards (Microdeal): £3
Sentinel (Firebird): £3
K-Word2 (Kuma): £15
Or £75 the lot.

AMIGA:
Graphicraft: £10
Textcraft: £10
Deluxe Paint: £10
Or £25 the lot.

HARDWARE:
Uchida DWX-305 Daisywheel printer. Fully QUME compatible. Comes with 3 extra daisywheels and 3 new ribbons. Works equally well with QL's and PC's - and probably most other computers. You'll need to supply your own lead though. Yours for £100

All prices are inclusive of post and packing. All commercial software comes in original packaging etc. I'm prepared to accept ST, Amiga or QL software/books/mags in (part) exchange.
Offers to the editor at the usual address.

PUBLIC DOMAIN NEWS

Organisationally the good news on the P.D. front is that we have completely re-organised the C.G.H. Services P.D. library. No longer will you have to send a complete list of all the programs you require and then wait for us to let you know how many mdvs/disks are needed and the cost. With the new system all programs are allocated to a batch, and each batch has its own code, and costs a quid to copy. The only exceptions are the programs that are too big to fit onto a mdv and which are priced according to the amount of copying involved and the size of the files.

O.K. what new programs have we found for you in the utilities area? For those people desiring different programming environments we've got Hans Lub's implementation of Prolog together with a single disk version of MicroEMACS. If you're interested in communications we've got Rainer Kowalick's VT100 Emulator with English documentation, whilst another reader has sent in some documentation on how to access the JANET network.

Hilary Snaden has sent in his versions of six PC Ham Radio programs. (There's plenty more of these to do !) whilst some Bristol users have sent in a Morse Code tutor.

As mentioned elsewhere, Michael L. Jackson has contributed his revised version of the Medic disk i/face software and manual. If anyone needs them I can also supply the documentation for the Silicon Express disk i/face and the utilities disk.

Stephen Bedford has added a few utility programs which he finds useful in his programming environment.

On the graphix front we have several new sets of screens. Emmanuel Verbeeck has sent us 3 disks of GIF format screens together with a ShowGif program. Andy Dean has sent in his Spectrum screens transfered to QL format. Keith Reader has been transfering ST Clip Art to the QL and we hope to have 6 disks available soon.

Chris Adams has been updating the QL World index and has added a QUANTA index. I've chipped in with an Archive dbase of QL Books. If you can complete my set - do let me know!

There have been updates to several existing programs. Jon Pennycook has updated his Cartridge Manager program to be a Device Manager program. It should handle most devices now, although we have yet to test it on a Hard Disk.

On the Fractal scene, Carl Cronin has produced version 3 of his program that has an improved zoom function and it can now animate screens. The disk comes with a 17 screen zoom sequence - but their are options to allow users to do their own. Carl has also sent in Enigma - an encryption program.

I have had a go at translating a few of the programs in the German SQLUC Library. On offer now are a Sprite Designer, a Basic-Design program (design some graphic on-screen and the program saves it as a Basic program) and a Biorythms program. More from this library when we get time to do the necessary translations.

It looks as if the International Freeware Exchange library - organised by SQLUC - is finally getting off the ground. The idea is to pool the resources of all the national QL groups and independent QL PD libraries by having just one library from which all participating members can draw. An excellent idea in theory (and I hope it works in practice) but there have already been some problems.

The first problem concerns copyright. As many of you may realise there are different laws in each country on computer software copyright, so that effectively what is piracy in one country is perfectly legal in another. Now this is bound to cause problems as, for example people in Germany and France can pass around programs appearing in QL World but we are not allowed to do so in this country.

Another complicating factor is that some groups, such as QUANTA in the UK are membership organisations. That is they exist and maintain libraries of software for their members. Inevitably there has been considerable leakage of the QUANTA library which has caused some ill-feeling among certain authors who rightly complained that their software was donated to the QUANTA library but expressly only for members. Another problem is knowing the status of software and how to deal with known pirates. More on this next time.

Richard

SCHOEN PC (XT) KEYBOARD

Occasionally I get queries from people trying to get hold of extra add-ons for their QL's. Usually I advise people to get MicroComputer Mart or check the adverts in QUANTA and QL World. Recently I was asked to find a QIMI Mouse interface for an American QL user. Lo and behold, QUANTA duly arrived with someone trying to sell a QL with a QIMI mouse i/face.

A little haggling brought the price down to a hundred quid (included a basic QL with a Minerva v1.64) which I thought was reasonable. A couple of days later the QL with mouse and an add-on Schoen PC keyboard was delivered safe and sound.

My initial impression was that the machine was not working, due to a strange fault with the colours. Rich Mellor advised ensuring all the chips were firmly seated. So the QL was taken apart, chips prodded (the Minerva was a shade lose) and things put back together. This seemed to do the trick until I moved the machine. Further research revealed that there was nothing wrong with the machine at all - it was my RGB lead that was objecting to being bent out of alignment!

My second problem related to the QIMI mouse i/face. Not that it didn't work - as a quick session with QPAC2 showed that the set-up performed quite well (when software has been configured to deal with it) rather the problem lay in the fact that I didn't seem to be able to get the QIMI i/face off the circuit board. No amount of struggling would dislodge it. So I may have to keep the entire system.

However what this has meant is that I currently have a very neat QL system with a proper keyboard. Which is what I should be talking about. The internal aspect of the keyboard is quite straight-forward, especially if it comes ready set-up. What has happened is that the QL's keyboard has been completely removed and replaced by a thin metal board. At the bottom left-hand corner is a socket for the keyboard connnector cable, and underneath the board is a small cable which connects to a small circuit board which presumably houses all the necessary bits and pieces. (As the kit came without any documentation I can't tell you anything technical about it.)

Now to using the keyboard, which is the most important aspect of the review. Its feel is 100% better than the usual QL keyboard, and it will take me a lot of persuading to go back to the old black keyboard. Suffice to say, my typing speed on this keyboard is about twice that of the old machine. Very comfortable on the fingers, perhaps a little clanky, but the audio confirmation of keypresses is very important. Another useful aspect is the lack of a key bounce, so no repeated keys from now on.

As for the layout of the keys, they are divided into the usual PC layout, with function keys to the left, the alphanumeric keys in the centre and the numerical pad to the right. There are a few extra keys that the normal keyboard does not have, including del left and del right, pause and break, number lock, + and - on seperate keys and which are all functional. There is also a sys req key which I don't think has any function on the QL. The pound and tild key has migrated to the line below and the forward slash now appears on the bottom row on the extreme left. The Alt key now sits where the Ctrl used to be, which in turn has replaced the Caps lock key, which is now where Alt used to be. One minor irritation is that the shift key is no longer as prominent as it used to be on the left.

Other points: I now have 10 function keys on the left, instead of five and all 10 of them work - not that much QL software uses 10, previously F6-F10 were simulated by using Shift and F1-F5. I particularly like having the delete keys on their own either side of the space bar, and so only requiring single key presses. (Ctrl plus cursor keys also still works.) The cursor keys are now found on the numerical pad on the right hand side and include diagonal keys, which only work with a few programs, such as QL Peintre.

Another neat touch is the LED on the Caps Lock and Num Lock keys. Very handy. Initially I thought the copyright sign had disappeared, but pressing shift ESC showed that it was still there.

Keyboard Products are currently selling the improved PS/2 keyboard with i/face for the QL. I'd recommend a replacement keyboard to anyone who has a lot of keying on the QL. Final point, the replacement keyboard has no feet. My way of tilting it is to prop it up on the old QL case.

Richard